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ABSTRACT

Outcomes of guidance can be assessed at these three levels: individual, where they are immediate; organizational, where they are intermediate; or societal, where they are ultimate. They may result in learning outcomes, school effectiveness, economic benefits, or social benefits. Various designs of outcome evaluation are described and recommendations are made as to which design is appropriate based upon the objectives of policy and the type of evidence available. A review of literature finds that convincing evidence of positive outcomes of career guidance has been difficult to quantify. Future research must be more longitudinal in order to identify long-term, deep-seated effects and that the three key players in the establishment of criteria for measurement of outcomes policy makers, practitioners, and researchers must engage in dialogue and agree on common approaches. (As part of a study of guidance systems in European Union member states, this paper considers different approaches to measurement of outcomes from career information and guidance service delivery, provides exemplars of different approaches, summarizes reviews of evidence using these approaches, and outlines policy priorities for the collection of evidence in the future and for effective sharing and dissemination of such evidence. It includes 86 references and 1 chart.) (MO)

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OUTCOMES FROM CAREER INFORMATION AND GUIDANCE SERVICES

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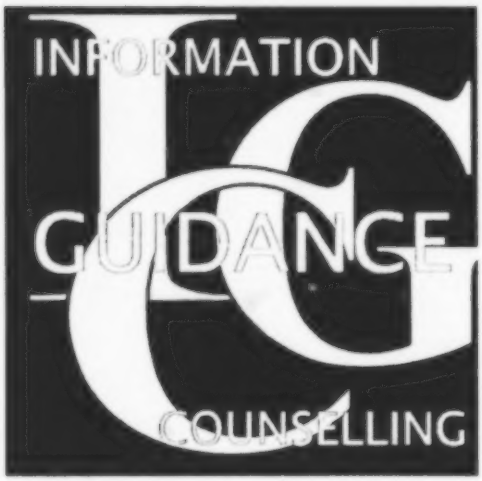

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National Institute for Careers Education and Counselling (NICEC)

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As part of a study of guidance systems in Member State, in a perspective of lifelong learning, which the European Commission is undertaking in co-operation with OECD, the National Institute for Careers Education and Counselling (NICEC) was commissioned to prepare a paper on "evaluating outcomes in guidance service delivery". The aim was to consider different approaches to measurement of outcomes from career information and guidance service delivery, provide exemplars of different approaches, summarise reviews of available evidence using these approaches, and outline policy priorities for the collection of such evidence in future, and for effective sharing and dissemination of such evidence.

It is important, at the outset, to recognise the policy context in which career information and guidance service delivery is located. While it is true that many recipients of services, and most certainly career guidance practitioners are convinced of the value of these interventions, policy makers require evidence of this in order to justify the outlay of significant tracts of government funding. As Watts (1999: 13) suggests, a distinction may be made between career guidance being viewed as a "worthy *private* good", which bestows benefits to individuals who "should have a civic right to have access to it regardless of the resources at their private disposal, and as a "*public* good" which generates social and economic benefits over and above those accruing to the individuals who receive it.

The paper draws extensively on the earlier work of one of the authors, John Killeen, as well as Watts (1999) and a more recent review undertaken in the UK (Hughes et al, 2002).

BACKGROUND ISSUES

It is important to recognise that attempts to undertake definitive studies, or provide conclusive evidence of the outcomes of career guidance activities continue to be beset by a recurring set of issues, which have been summarised by Hughes et al (2002) as follows:

- there are a wide range of factors which influence individual career choice and decision-making, and/or which can impact on outcomes;
- career guidance is frequently not a discrete input, but rather is embedded in other contexts, such as learning provision, employer/employee relationships, and or within multi-strand initiatives;
- comparing the evidence available in different studies is problematic when the nature of career guidance, the depth of work undertaken and client groups, vary considerably;
- there is not an agreed set of outcome measures for career guidance, or common methods of collecting output, or outcome data, except in the case of a limited number of discrete programmes/areas of work".

(Hughes et al, 2002:19)

Definitional problems also abound when addressing this area. The first of these may be in attempting to define *what guidance is*, and what it is intended to do. In seeking to identify and measure the outcomes of career guidance, a clearly delineated 'guidance' intervention is desirable, although not always achievable. Moreover, it can be argued that effective career guidance is a process which, over time, is made up of a number of individual interventions, possibly of different types.

Allied to this is the question of what should be included in any study as *constituting a career guidance intervention*. A wide range of activities, from telephone call services to in-depth face-to-face interviews may be included here. In practical terms, it may be advisable to adopt the approach taken by Killeen and White (2000) in their study of the impact of career guidance on adult employed people. They chose to restrict their sample to recipients of guidance services which were publicly available, across a range of mechanisms.

Similar concerns arise when considering *what constitutes a positive effect*. For example, while reduced student drop-out from courses may be deemed to be a positive effect of the input of information, advice and guidance, it should be remembered that 'drop-out' can also be positive, as when it is the result of finding a job or of transferring to a more appropriate or higher level course.

In order to ensure a clarity of focus in the paper, and to utilise the available resources most effectively, 'approaches to measurement of outcomes', as mentioned in the specification, will be interpreted as 'the general types of study designs through which outcomes are estimated' and *not* as 'approaches to operationalisation and measurement of the outcome variables'.

Another major issue which must be confronted when assessing the degree of reliability to place on measures of the impact of guidance is in *differentiating the effect of the guidance* from that of a whole series of other contributory factors. As Herr (2001) states; "the frequent difficulty in research and, by extrapolation, cost/benefit analyses in career development lies in verifying the relationship between quality outcomes and the specific career development interventions, often the measures of such outcomes are crudely measured and the career development interventions are not adequately isolated or the 'treatment' described".

Underlying some of the above statements may be a concern that the search for concrete, readily measurable outcomes is a flawed exercise, as it may involve according dubious quantitative specificity to what are essentially qualitative and sometimes highly subjective factors. For example, Herr (2001) quotes a response from a German contributor: "who needs proof of something as obvious as these fundamental truths about mankind and its typical behaviour? Forget about 'proof' anyway: proof is a fictitious concept of the fading mechanical era". While such sentiments may find favour among those who have a deep-seated belief in the efficacy of career guidance, it is unlikely satisfy policy makers who are required to be accountable for investing public funds.

TYPES OF OUTCOMES FROM CAREER INFORMATION AND GUIDANCE DELIVERY

Watts (1999) identifies three locations for assessing the outcomes of guidance, each of which has a different timescale attached to it. These are: the *individual*, where the outcomes, which are designated as 'learning outcomes' are immediate; *organisational*, where the outcomes, which are designated as 'school effectiveness (e.g.)' are intermediate; and *societal*, where the outcomes, which are designated as 'economic benefits and social benefits' are ultimate. The time period over which outcome measures are applied is extremely important, as it could be argued that longer-term outcomes, for the individual, the organisation, and society as a whole, are likely to reflect the true benefits of guidance. However, what may be deemed appropriate or desirable timescales from an evaluation perspective run the risk of being beyond the scope and budget of individual research projects, and of offering insufficient immediately relevant data for policy makers.

From this, he focuses on the four types of outcomes, with economic benefits and social benefits being treated separately. As far as 'learning outcomes' are concerned, Watts posits that these are likely to continue to provide the most readily usable measures, because of their *appropriateness*, in that they reflect the guidance practitioner's concern to offer a range of alternatives, rather than being overly prescriptive, and *practicability*, in that the immediate, or short-term effects are able to be measured with relative ease.

Within the category of organisations for which benefits may be derived from guidance, Watts includes employers, as well as schools and other education and training providers. For the latter, the positive outcomes will be greater efficiency resulting from learners being engaged on more appropriate course provision, and therefore reducing drop-out and enhancing attainment. Retention, productivity and greater efficiency and effectiveness among employees will accrue to employers from suitable guidance activity.

There is a danger that in seeking to identify and measure outcomes from career guidance activity, attempts are made to incorporate too wide a spectrum of effects, some of which may

go far beyond what might be regarded as the principle focus and remit of that activity. Watts refers to these as *side-effects*, which may include aspects such as "academic motivation and attainment" and other attitudinal changes. However, it is difficult to see how studies of the impact of career guidance activity can be meaningful if they do not allow for what might constitute life-changing effects of interventions, which may or may not be readily apparent in terms of easily observable or tangible outcomes, such as the take-up of learning opportunities, or entry into employment.

Certainly the ability of career guidance to initiate or encourage attitudinal changes is held to be highly significant in the literature. Hughes et al (2002:10), in considering the economic benefits of guidance, provide a set of categories for measuring this impact, with "motivation and attitudinal change" being placed alongside learning outcomes; participation in learning; student retention and achievement; job search/reduced unemployment; employment; and economy. Moreover, they emphasise the fact that Killeen et al (1992) "explicitly state that attitudinal change and learning outcomes are important 'precursors' to the economic benefits of guidance". Earlier, within a classification of learning outcomes, Killeen and Kidd (1991) placed "attitudes" alongside decision-making skills; self-awareness; opportunity awareness; certainty of preference; and transition skills.

In terms of economic benefits, these have been characterised as comprising three elements: individual decisions; market failures; and institutional reforms (Watts, 1999:15). As far as individual decisions are concerned, effective guidance can ensure that job search and employment-related decisions are better informed, thereby resulting in a more efficient workforce and greater complementarity between the supply of, and demand for labour. Similarly, decisions relating to learning opportunities are more likely to be appropriate and lead to 'successful' outcomes. Herr (2001) characterises the economic benefits derived from career guidance by individuals as being "their ability to secure jobs with improved pay, in shortened periods of unemployment, in obtaining greater congruence between personal interests and abilities in a job chosen and in the experience of extended tenure in that job".

The chances of market failure can be alleviated by effective career guidance, through reducing the propensity of learners to embark upon and subsequently drop out of education or training courses, by reducing the amount of mismatch between job vacancies and the available pool of unemployed labour, and by re-enervating previously discouraged workers, who were not aware of potential opportunities for them to regain employment. A reduction in the length of job search may also be a valid 'positive' measure.

Effective career guidance can assist institutional reforms by ensuring that potential participants are aware of any developments which may impact on their decisions, such as choice of course or institution.

Turning to the social benefits of career guidance, Watts contends that "the case for guidance having a role in reducing social exclusion is not difficult to make", in that career guidance focuses on encouraging participation in learning and in employment. It can therefore be seen as a force for preventing 'at risk' individuals from becoming socially excluded, and alleviating the situation of those who have become excluded, by assisting them to be re-engaged through education, training or employment.

It is important to emphasise here the difficulties of defining social benefits, for while there are clearly benefits to be derived by society (and the economy) as a whole from effective career guidance, for example through attitudinal shifts which result in a greater attachment to prevalent societal values, there are also what may be termed social benefits which accrue to individuals. These would include an improved 'quality of life' (Watts, 1999:17). Moreover, in both cases, great difficulties arise in identifying, differentiating and, crucially, in measuring those benefits. Herr (2001) contends that "for society at large, a

purposeful, productive, teachable work force may enhance the competitive edge of a nation in competing for market share in a global economy, in being innovative, and in maximizing high skill/high pay jobs in the occupational structure". While it may be difficult to argue against this, there remains the great difficulty of establishing the part played by, and quantifying the contribution of, career guidance to the creation of such a workforce.

Mayston (2002a) contends that "there are a number of important wider social benefits which are likely to be generated by high quality career guidance, and which could be included in a cost-benefit analysis of such career guidance" (p.20). These are indeed "wider" benefits, for they comprise: increased tax yields to the Exchequer; reductions in unemployment and other social security costs to the Exchequer; reductions in health care costs on the National Health Service; reductions in the frequency and costs of crime; macro-economic benefits; and net social benefits.

In discussing 'quality outcomes' from career guidance activity, Savickas (2001), on the basis of submissions from correspondents from different countries around the world, concluded that, with the exception of Spain, "policy makers and practitioners view quality outcomes from two distinct vantage points. Policy makers view outcomes from an objective perspective that focuses on workers' success, satisfactoriness and adjustment. In contrast, practitioners view outcomes from a subjective perspective that focuses on worker's job satisfaction, personal development, and maturity. Policy makers look at what workers contribute to the economy whereas practitioners look at what workers receive from employment". He then goes on to differentiate the two perspectives as representing quantitative quality outcomes (policy makers) and qualitative quality outcomes (practitioners). This is an interesting stance which, while being over-simplistic, does point up the difference between what policy makers and practitioners may regard as appropriate measures of successful outcomes of career guidance.

Herr (2001) addresses this issue of diverging interests between policy makers and practitioners from a different perspective. He contends that whereas policy makers are concerned with macro-economic issues, such as overall levels of employment and unemployment, labour productivity, the position of marginalised or disadvantaged groups, the effective use of resources and "in some cases, social justice", practitioners are perceived to have a focus at the "micro-level", with a concern for individual clients and how they may achieve learning or employment goals which most nearly match their aspirations or provide job satisfaction. However, in line with Savickas' assertions, he queries whether reliable quantitative indicators can be developed to provide a measure of factors such as "independence/self-directedness, self-reliance ", which are "subjective and qualitative in their essence".

CRITERIA FOR OUTCOMES

As the titles of some of the key references suggest, an ongoing focus of attention when assessing the outcomes of career guidance has been the costs and benefits of that activity (eg Hughes et al, 2002; Herr, 2001; Mayston, 2002; Watts, 1999). However, in his synthesis of a range of country papers, Herr (2001) posits that "the implementation of costs/benefits analyses as a national strategy has not become an empirical process, but rather a presumptive process; presumptive in the sense that benefits are expected to flow from the implementation of career services, although such hypotheses have not been tested". This again highlights the

difficulties inherent in identifying exactly what benefits may be anticipated from career guidance, and points up the need for developing an understanding of these benefits which is common not just across countries, but between policy makers, practitioners and researchers.

A key issue for Herr in the development of such an understanding is the lack of agreement on "the language of career development initiatives". Certainly, the development of common, agreed terminology for different activities may assist in enabling evaluation or measurement of initiatives to be generalisable and comparable, and thereby lead to the creation of a more substantial body of evidence on which to base arguments about the reliability of 'outcomes' emanating from career guidance.

A New Zealand based study of outcomes from career intervention conducted in 1999 identified 'both 'soft' outcomes, related to how respondents felt about their career goals, and 'hard' outcomes, which were measures of what they did to achieve those goals. The definition of career intervention used was "having attended a career guidance session with a career counsellor".

As far as cost/benefit analysis is concerned, Herr (2001) poses the question: "is it possible to implement comprehensive cost/benefit analyses without a research base that addresses the effects of various career development interventions on different populations with different career goals?".

DESIGNS OF OUTCOME EVALUATION

In the evaluation of state interventions into the labour and human capital markets, terms are increasingly used which, so far as we are concerned with career information and guidance, may be represented as follows.

Treatment. An information or guidance technique, process, programme, practitioner or service, the effect of which is to be estimated.

Local average treatment effect (LATE). (Imbens and Angrist, 1994). The average effect (or, estimated average effect), of guidance treatment on the treated in an observed sub-population of those eligible for treatment (or, in a sub-population of which the observed, treated subjects are an unbiased sample). It is sometimes remarked that the samples in studies of guidance effectiveness may not be 'representative' and that there are doubts about how, or how far, results should be 'generalised'. Providing samples are taken from a defined population without bias, or, so as to allows correction of bias, then it is possible to define a LATE.

Average treatment effect on the treated (TT). Mean effect of treatment as currently allocated, or, on treated subjects in the whole eligible population.

Average treatment effect on the untreated (TU). Estimated mean effect of treatment on all untreated subjects in the whole population eligible for treatment. That is to say, the estimated average treatment effect on the untreated, should they have been treated. Since treated and untreated may be unlike, so may TU differ from TT.

Average treatment effect (ATE). Estimated mean effect of treatment on all treated and untreated individuals within the population eligible for treatment.

Since selection to treatment within the eligible guidance population is usually non-random, it usually is *not* possible to assume that:-

$$TT = TU = ATE$$

Since studies of guidance often consider sub-populations of those eligible for treatment, it often is *not* possible to assume that:-

$$LATE = ATE$$

And since guidance samples are often idiosyncratic and not taken from a defined population in a way which is either unbiased, or, allows correction of bias, LATE is frequently undefined.

Why are these so? For many treatments, such as training, it is not necessary to make the general case. That is to say, it is already known, or assumed beyond question, (a) that the treatment can lead to learning outcomes (knowledge, skills, work habits, etc.) which it has as an objective to develop, (b) that these learning outcomes are in demand in the labour market and (c) that some treated subjects will supply this demand. In consequence, the aim of econometric evaluation of such treatments is, ultimately, to allow cost-benefit analysis. In this circumstance, the main policy questions are as follows:

- what are the existing private and public rates of return on investment in treatment?
- do these rates vary according to type of treatment and/or according type of treated subject?
- what would be the implications for these things of inducing a higher (or a lower) rate of treatment participation, or, of altering eligibility criteria, or, of substituting treatments for one another, and so on?

However, some treatments exist at the ends of relatively lengthy chains of connection to *a priori* assumptions relating to strategic policy goals, for example, the *a priori* assumption that the labour and human capital markets suffer serious imperfections of information which must be remedied, or, that there is a need to persuade adults of the advantages of continuing education and training (CET), or welfare-dependent people of the advantages of employment. Others exist because of the existence of a social problem (e.g. unemployment), which cannot be solved by *fiat*, but where 'no treatment' is not a viable policy option within a democratic system. In other cases an organisational problem may exist (e.g. failure of students to make realistic or stable option choices at the point of entry to or within schools and colleges) for which non-coercive intervention into decision processes appears to be the only tenable remedy. From the perspective of policy (although not from all perspectives, including some adopted by guidance practitioners), 'career information and guidance' describes, in indefinite fashion, what is done (the treatments) corresponding to these and similar circumstances and objectives. In each case, questions of the following kinds are asked. 'Does a treatment produce effects envisaged in policy?' 'Can a treatment be found which is capable of producing effects envisaged in policy?' 'Can evidence be found that one treatment is more effective than another in producing effects envisaged in policy?'.

In short, the questions addressed in econometric evaluation are seldom addressed in guidance evaluation, because two other, much more fundamental, tasks remain paramount. The first of these is to test the null hypothesis (to establish that there *are* effects), and the

second is to test for significant difference between the effect sizes of alternative treatments. Fortuitously, the academic discipline most influential over both the practice and the most rigorous forms of evaluation of guidance has been psychology and these are the kinds of tasks which it conventionally adopts, in a somewhat 'clinical' approach to evaluation.

The methods used in studies of the effectiveness of guidance could, in principle, be ranked in approximate order, from those which do not test the hypothesis of an effect on the outcome, to those which give unbiased estimates of the ATE and/or unbiased estimates of one or more LATE relevant to policy. However, in order to review existing studies, it is necessary to concentrate on the ability of designs to demonstrate gains in the samples studied (internal validity), consistent with the approach actually taken, and not include the ability of studies to estimate ATE/LATE. Most studies can also be assessed on this dimension. The implication of what has already been said is that, in the great majority of cases, the rank of actual studied is low. No attempt is made here to catalogue *all possible designs*, since, for example, there is a very large family of experimental designs, most of which have never been used in studies of guidance, or are very seldom used.

Of course, ultimate policy goals may be stated in terms of GNP, net exchequer saving, and so forth, but studies of guidance do not actually work at this level. For the present purpose, it is sufficient to assume that policy goals are formulated in relation to individuals or small aggregates, such as families, schools, employing organisations or small administrative districts.

Irrespective of the unit of analysis, and because serious national estimates are not attempted, estimates of the outcomes of guidance lack adjustment for displacement. That is to say, when guidance is evaluated, it is not asked if a restricted set of outcomes (e.g. employment opportunities) is *redistributed* by means of treatment. Sometimes redistribution is a plausible objective of policy on the ground of equity. For example, guidance may be given to a group which suffers employment discrimination. In this case, however, the aim is to redistribute employment from those not eligible for treatment, to those who are eligible for treatment. It is not the aim of policy to redistribute employment from those eligible but untreated, to those eligible and treated. Sometimes, the aims associated with guidance, such as improved fit between the jobs accessed and the aspirations of the job-seekers, imply redistribution with net gain, as in job satisfaction. For example, assume that, over some period, amongst those eligible, the treated have a higher rate of employment or job satisfaction than the untreated. At one extreme, *all* of the extra employment or job satisfaction of treated subjects equals an increase in the number of people in employment or the total amount of job satisfaction. But at the other extreme, employment or job satisfaction is thought a zero-sum game and guidance treatments confer competitive advantage equal to the guidance effect. Now, assuming that the outcome is available only to those eligible for treatment, this gives:

$$TT + TU = 0 = ATE$$

Of course, assuming a guidance treatment effect on the treated, a much more realistic assumption is that the rate of displacement falls between these poles, but is unlikely to lie precisely at one or the other. It may, therefore, seem odd that such estimates are not insisted upon by policy makers. But there is a simple explanation. The outcomes which are most easily demonstrated do not suffer from a credible threat of this kind. For example, the learning outcomes of guidance are very difficult to conceptualise as competitively distributed. On the other hand, the outcomes most susceptible to this threat are far from adequately demonstrated. Thus, at the present state of development of guidance evaluation, the estimation of displacement effects may be regarded as a luxury.

Key issues to be considered when assessing the efficacy of methodological approaches to measuring the outcomes of career guidance activity include the restrictions which are placed on the timescale, and the difficulty of incorporating control groups or an appropriate counterfactual. In terms of the former, while it can justifiably be argued that the substantive benefits accruing from effective career guidance can take many years to emerge, it is also true that the longer the time span, the more difficult it becomes to differentiate the impact of the guidance intervention from an cumulatively increasing number of other potential factors.

From a methodological standpoint, randomised trials may be the most suitable approach to be adopted, offering the prospect of robust data on which to base conclusions and recommendations. In a standard experimental situation, people would be randomly assigned to an experimental group or a control group, and career guidance administered to those in the experimental group while being withheld from those in the control group. The control group provides the counterfactual and elicits data on what happens in the absence of the treatment. The difference in the outcomes scores would then represent the impact of the guidance intervention.

However, this method may be difficult to apply in practice, either because of threats to 'internal validity' (to causal inference), or because of reluctance to extend the use of randomisation to labour market interventions or into educational settings. In principle, there is scope for more use of the method to study short-run guidance effects, as occurs in the US. But, when randomised trials are not possible, the main options available have, until recently, been 'regression adjustment' – the exertion of statistical control and adjustment – very simple sample matching, or a fairly crude combination of these two things. However, each poses many problems and, following groundwork by statisticians (notably by Rubin and by Heckman) a new option, better-suited to the demands of programme evaluation, is now available. The utility of this method in guidance evaluation has already been shown by Killeen and White (2000), who found that by using the propensity matched score method, estimates of the impacts on outcomes tended to be less strong than was the case with regression based analysis.

The essential elements of this approach may be summarised as follows. Basic assumptions are or imply (a) that control sample members *could* have received the 'treatment' (in this case, guidance) and (b) that the factors disposing individuals to be treated are observable. The method is a development of simple 'matching on observables', in which untreated sample members are matched to their treated counterparts. However, in simple matching on observables, and with interaction, there is geometric increase in the number of cells to be matched. Thus, it is usually possible to match only on a handful of characteristics such as age group, sex and so on, leading to the need for further adjustment, normally in violation of sampling assumptions. However, it has been shown that a result equivalent to matching on the set of observables upon which treatment is conditional may be obtained by matching, instead, on the *probability of participation* in the treatment (the 'propensity score'). A propensity score is obtained for every case (both treated and untreated) by modelling participation. As treatment is usually binary (it happens or it does not), the method is usually simple logit or probit. The combined treatment sample and sample of potential control subjects are used to obtain this model. The propensity score of each case is then computed from the participation model. Following this, control cases are selected from the pool of potential control subjects according to their match to treated cases. Sampling may be with replacement and more than one control case may be selected for each treated case, thus allowing a number of types of weighted comparison sample to be created. In effect, the aim is to construct an *approximation* to a randomly-assigned control sample. Thereafter, simple, easily-communicated comparisons may be made between samples and the outcomes estimated.

Unlike regression adjustment, which should not, but repeatedly does, distract us from this issue, propensity score matching reminds us of the importance of an adequate appreciation of the factors which lead adults to use guidance and of the extent to which this is and is not a random process. By combining qualitative with quantitative research, it should be possible to get a better understanding of these factors than hitherto. Guidance effectiveness research is as good as the counterfactual and this knowledge, coupled with an appreciation of alternative determinants of outcomes, is vital to refinement of the counterfactual in any non-experimental approach. This should be cumulative across studies, although we would suggest that the currently most apt method by which to *test* the counterfactual is the one just described.

Similarly to designs, outputs and outcomes themselves may be ranked according to their proximity to the objectives of policy, on the assumption that outputs and outcomes which are plausible antecedents of policy goals are of less importance than outcomes which actually represent those goals. As we have already indicated, the latter remain the most problematic. Taken together, the rankings of designs and outcomes form a matrix which may be read from top left (*prima facie* but unconvincing evidence of effects which may be antecedents of outcomes central to policy) to bottom right (convincing, demonstrations of effects on outcomes which represent policy goals, but from which unbiased estimates of ATE and/or LATE are not usually possible). The further we move in this direction, the less evidence is available. Thus some of our recommendations are incipient in the figure below.

		Outcome by design matrix
		Basic design
Client opinion	1	Client ratings/satisfaction
	2	Client attribution of outcome
Process-outcome observation	3	Process-outcome observation
Basic non-experimental designs	4	Pre-post test uncontrolled trial
with and without pretest	4	Non-equivalent groups post-test only
	5	Regression adjustment post-test only
	5	Non-equivalent groups pre-post test
	5	Non-equivalent groups with some whole-sample matching /weighting post-test only
	5	Simple matched individuals (case control) post-test only
	6	Non-equivalent groups with some whole-sample matching /weighting pre-post test
	6	Regression adjustment pre-post test
	6	Simple matched individuals (case control) pre-post-test
New methods for matching on	7	Treatment Propensity score matched without pretest outcome values
observables	8	Treatment Propensity score matched with pretest outcome values
Randomised experiments	9	Randomised alternative treatments trial without no-treatment control group
	10	Randomised wait-list/lagged effects and other restricted trials, with no-treatment control group
	11	Randomised trial with no-treatment control group

Outcome Type	
Immediate Outcomes	
Knowledge and Skills	Decision skills, opportunity awareness
	Transition skills, career management skills
Attitudinal/affective	Optimism, sense of personal control, anxiety reduction etc
Decision state	Decidedness etc
Intermediate Outcomes	
Motivational commitment	Motivation to work, motivation to train etc
Search	Search strategy, intensity, channels duration
Decision-making	Decision behaviour, decision outcomes
Ultimate outcomes at the individual level	
Training and education effects	Take-up, attainment level, match to skills relevance to employment and drop-out rates
Labour supply effects	Reservation wage, entry into labour market, withdrawal from labour market etc
Job effects	Job entry, job quality, functional flexibility/job change, performance, productivity, adaptation to role, role innovation etc.
Ultimate Outcomes at the System Level	
Employing organisations	Increased labour productivity, reduced recruitment and turnover costs, increased numerical flexibility, other organisational flexibility, rate of introduction of new processes etc
Education and Training Providers	Student recruitment and retention, adaptation of schemes, management costs for complex schemes, attainment levels, income etc
National	GDP growth rate, rate of structural economic change, reduced skill shortages, lowered unemployment and exchequer savings etc.

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DISCUSSION OF EVIDENCE

The difficulties of producing convincing evidence of the positive outcomes of career guidance can be gauged from the conclusion reached by a review of international literature (ACNielsen, 1999), which stated that "although there is little hard evidence to back up the proposition that career guidance has economic and social benefits, the rationale behind such a proposition is sound". While this represents an accurate appraisal of the position and few involved in career guidance activity would disagree with the "proposition", it falls some way short of the economically solid case which is likely to be needed to persuade government departments which control the purse strings, to provide substantial investment in career guidance.

In the New Zealand study referred to earlier (ACNielsen, 1999), both qualitative and quantitative interview techniques were used, and a sample of 400 respondents were followed up for up to a year after their experience of the guidance intervention. Interestingly, in contrast to the somewhat downbeat tone of the conclusion to the literature review, the New Zealand study found that eighty per cent of the respondents claimed that they had made changes related to work as a result of their career counselling session. Of these, 28 per cent had entered a job which matched their aspirations or skills and 27 per cent had embarked on relevant education or training. Moreover, 86 per cent of the sample felt that Careers Services had been influential in their employment-related decision-making.

As far as 'soft' outcomes were concerned, 54 per cent felt that Careers Services had provided them with a range of options for future employment and career direction, while 36 per cent suggested that the input from Careers Services had enhanced their self-confidence and self-esteem, especially where job-seeking was concerned.

As was alluded to earlier, *attitudinal change and shifts in individual motivation* are considered to be important outcomes deriving from career guidance interventions. Hughes et al (2002) provide the following examples, largely drawn from evaluations of programmes or initiatives which incorporated some element of career guidance, showing a positive outcome emanating from the intervention: "

> "Bysshe and Parsons (1999) reported changes in self-confidence in 'callers' to Learning Direct
>
> James (2001) found that patients who consulted a 'Learning Adviser' based within health centre settings reported that their motivation and self-esteem had improved.
>
> Morris et al (1999) highlighted that access to good quality careers guidance was a critical key factor in raising young people's levels of awareness and positive attitudes towards vocational training.
>
> Barham, Hughes and Morgan (2000) in their study of New Start pilots found that some young people were thought to have made significant gains in terms of self-confidence and self-esteem.
>
> Hasluck (2000a) found that young people (18-24 year olds) on New Deal reported improved motivation and self-confidence.

Winterbotham et al (2001) reported on the impact and effectiveness of the New Deal 25+ for long-term unemployed. They indicated that those who had participated in courses in job search skills as part of the 'Gateway' had gained confidence.

Coopers and Lybrand (1995) evaluated the 'Skill Choice' programme for adults and concluded that participants had improved their attitude towards training, becoming more qualified, and their own career development.

Skills Task Force (2000) Skills for All: Research Report from the National Skills Task Force. DFEE, Sheffield:

'A significant proportion of adults have no interest in further learning. This lack of demand is likely to act as a barrier to future development for people with low levels of skill as much as it is for those lacking basic skills. Pressures from work and family were quoted by one in five of those reported in NALS as reasons for not participating in learning. However, a lack of confidence related to age and ability, and ignorance about opportunities were quoted by similar proportions. This suggests that better guidance or counselling could persuade some of these adults about the merits of further learning'."

(Hughes et al, 2002:10)

While this list provides powerful support for the efficacy of career guidance, it also underlines one of the great dilemmas when attempting to make definitive statements about the impact of that guidance: that is in being able to differentiate the impact of the 'guidance' component from other aspects. In this way, it may point up the fact that guidance can be highly influential in conjunction with other types of intervention, such as the provision of training. It does, however, remind us of the difficulties of making claims for the impact of career guidance per se.

As far as *learning outcomes* are concerned, Watts (1999:14) asserts that "evidence on the learning outcomes of guidance is substantial and convincing". This statement is based on an appraisal of forty studies, which overwhelmingly pointed to some positive outcomes, and is supported by American studies of a similar nature (Spokane and Oliver, 1983; Oliver and Spokane, 1988). Overall, however, Watts is at pains to advise against placing undue reliance on what is admittedly limited evidence, which is partly attributable to the acknowledged difficulties of undertaking studies which have sufficiently large sample sizes and appropriately sensitive data-gathering techniques and instruments. Indeed, Killeen et al (1992) found no evidence of guidance interventions leading to increased participation in learning.

Here, the problem of disentangling any specific 'guidance' effect from a wider range of contributory factors is again evident, and Hughes et al (2002) point to a number of studies which cite guidance as having contributed to an identifiable increase in participation (see Killeen, 1996; MORI, 1996; Coopers and Lybrand, 1995; Killeen and White, 2000; and MORI, 2001. This leads them to conclude that "there is now reasonably strong UK quasi-experimental evidence that voluntary exposure to guidance increases the probability of adult participation in continuing education and training, relative to similar individuals not exposed to guidance" (p. 12).

Killeen and Kidd's (1991) earlier study asserted that, for each of the categories of learning outcomes they identified (i.e. attitudes; decision-making skills; self-awareness; opportunity of awareness; certainty of preference; transition skills), their review, which was largely based on American data, indicated that positive impacts could be identified. Hughes et al (2002) confirm this finding, citing a range of more recent studies predominantly from the UK (see Bysshe and Parsons, 1999; James, 2001; Brooks, 1998;

Sims et al, 2001; Killeen, 1996a; Hasluck, 2000a; Davies and Irving, 2000; Winterbotham et al, 2001; Van Reenen, 2001; MORI, 1996; and Killeen and White, 2000)

Focusing on the impact of careers programmes in schools in the UK, Andrews et al (1998) suggested that the evidence could be viewed from three perspectives: from a *positively support* perspective, careers work was seen to contribute to enhanced achievement, on the part of pupils, in addition to other beneficial effects on decision-making; from a *neutral* perspective, it was regarded as having no effect on performance or behaviour; while from a *distractive* perspective, it was seen to shift the focus of pupils in an unhelpful way. This hardly provides compelling support for the efficacy of careers programmes in schools. Nor does the summing up by Watts (1999) that " the most important conclusion to draw from our careful review of the research on the effects of careers education and guidance programmes on school effectiveness (Killeen, Sammons and Watts, 1999) is that we have found no evidence at all that it has negative effects. The research is admittedly limited". The studies referred to were mainly from the United States and pointed to some positive effects on academic achievement (Watts and Herr, 1976; Evans and Burck, 1992; Lapan, Gysbers and Sun, 1997).

Killeen, Sammons and Watts (1999) assert that "there is a strong theoretical case for supposing that career education and guidance programmes are likely to have a positive effect on educational motivation and hence on academic attainment". They suggest that such claims are grounded in manifestations of motivation theory, including "self-efficacy theory, achievement motivation theory, and attribution theory". However, hard evidence to support these claims is lacking, and reliance is placed on the contention that "certainly there is no evidence that careers programmes have negative effects on motivation and attainment: the limited evidence we have suggests that they have modest but positive effects on these variables".

Similarly, the robustness of data which purports to show a causal link between career guidance and increases in rates of *retention and achievement on education or training courses* is debatable. Killeen et al (1992) suggested that UK studies which sought to establish this causality were "methodologically flawed, inadequately reported, or both". While more recently it has been re-asserted that inadequate information, advice or guidance contributed to student drop-out (eg McGivney, 1996; Sargant, 2000; Morris et al, 1999), it is once more the case that any increases in student retention and achievement rates may be attributable to a series of factors, some of which will be highly specific to a particular course or institution, but which could include information, advice and guidance provision.

Studies providing evidence of the *economic benefits of career guidance* are thin on the ground. Reference has been made to American studies, involving controlled trials, which pointed to career guidance having led to individuals entering more suitable jobs, achieving greater job satisfaction and experiencing less job turnover than their counterparts who were not in receipt of guidance (see Killeen, White and Watts, 1992 for an overview). However, these studies were conducted in the 1920s and 1930s, and therefore their relevance may be questionable. More recent (although still dated) studies conducted in the United States showed that Job Clubs, which included some career guidance provision in their remit were successful in reducing dependency on welfare payments and thereby making considerable cost savings. Again, this does not provide conclusive evidence of the likely impact of conventional career guidance interventions (Azrin et al, 1980; 1981).

With reference to UK studies which have addressed similar issues, Hughes et al (2002:14) state that "the evidence to date is that quite intensive, multi-method guidance intended to support the job search of non- or unemployed people does reduce mean job search time/enhance re-employment rate over the short-to-medium term".

Reference was made earlier to the potential benefits of career guidance to employees, notably in reducing market failure through enhanced retention and productivity. While there is a dearth of research data to substantiate such notions, Hirsh et al (2001) suggest that, from their study, evidence of 'softer' outcomes accruing to employees, such as motivational and attitudinal shifts could be discerned.

An interesting dimension to the evidence which is available on take-up and consequent effects of career guidance interventions relates to equal opportunities. In the UK, studies have shown that Afro-Caribbean and Asian young people are more likely to avail themselves of formal career guidance provision than their White counterparts. This is attributed to their relative lack of informed kinship and friendship networks (Sillitoe and Meltzer, 1985; Verma and Darby, 1987).

An example of the way in which the cost of drop-out from education and training courses can be measured was a study undertaken in the UK by the Audit Commission and Her Majesty's Inspectorate (1993). Their estimation of the costs of 16-19 year olds failing to achieve their attainment goal stood at £500 million. Additional costs, such as those associated with unemployment, would add to this figure.

To date, most experimental evidence is of US origin and concerns outcomes which can be measured immediately after guidance. These studies demonstrate a wide range of positive outcomes, many of which may be characterised as 'learning outcomes of guidance'. However, most US samples are drawn in the initial phase of education. Consequently, relatively little is known from this source of relevant effects upon adults, even in the short run.

In the UK, guidance services for adults are strongly-oriented towards continuing education and training, but only recently has it been demonstrated that guidance actually raises the probability of participation. Killeen and White's (2000) study demonstrated this both for the short-term unemployed and for employed people who seek it on their own behalf. It is important to note that, for unemployed people, the findings revealed that this was without a corresponding reduction of the chances of re-employment, although it was not possible to control for prior motivation or intentions. The same authors have shown that guidance has a similar effect on participation in self-funded CET by employed adults. Moreover, it was demonstrated that this was net of intentions – use of a guidance service raised the probability of participation relative to comparison cases with similar participation intentions. As is common in UK evaluation research, data were available only from shortly after initial exposure to guidance and methods were non-experimental.

Killeen and White's (2000) study of employed adults was also indicative of an appropriate approach to the collection of relevant longitudinal data, within a reasonable timeframe for both policy makers and researchers. Postal questionnaires or telephone interviews were administered to a sample of adults two to three months after they had experienced some form of guidance intervention. Here, the emphasis was on obtaining background information about their personal characteristics, education and training experience, occupation, job satisfaction and their exposure to guidance activity. A matched sample of employed people who had not received guidance was also interviewed, as the control group. Both groups were then followed up some twelve to fifteen months later and information gathered about education and training, job satisfaction, earnings and progression. A further follow-up was conducted some eight to ten months later. Thus, there was a longitudinal element which enabled the impact of guidance interventions, in terms of both learning and employment outcomes and shifts in aspirations and attitudes to be assessed.

POLICY IMPLICATIONS

At a time when a concern for tackling problems arising from increasing numbers of socially excluded individuals is a common theme among a wide range of countries, the vital role which effective career guidance offers is also generally accepted. This may manifest itself in the targeting of resources, including career guidance provision, on those who are 'at risk', and in this type of guidance being regarded as a component in the drive to inculcate an attachment to notions of learning and to individuals becoming proficient in managing their own careers and acquiring and sustaining employability.

In order to generate more substantive research evidence which is of both immediate and long-term relevance to policy makers, Hughes et al (2002:14) make a plea for significant longitudinal studies to be undertaken: "... the general case for intensive methods applied to welfare claimants seems reasonably secure and it is now time to investigate differential effectiveness by type of guidance, type of client and labour market context in order to refine public policy. As the economic arguments concern the economy as a whole over the longer term and are not confined only to current welfare savings, there is inadequate information concerning the effects of less intensive guidance, of guidance on non-claimant samples, and over a somewhat longer time scale".

Taking up the point made earlier by Savickas, there is clearly a need for greater discussion, and, hopefully, agreement between policy makers, practitioners, and researchers over what will be deemed appropriate, desirable and measurable outcomes of career guidance. Commenting on the various country papers which formed the basis of his contribution, Savickas states that "of course, once JOINT outcomes are identified, we must (as noted by Canada, Ireland and New Zealand) find and agree on criteria for evaluating outcomes, not just for the individual but also for societies. There are problems in constructing adequate measures. Furthermore, as New Zealand described, there are trade-offs between competing objectives such as those focused on long-term sustainable employment and those focused on minimizing unemployment by moving people into new jobs as quickly as possible". Arriving at an agreed understanding of the outcomes would seem to be a pre-requisite of a genuine, concerted attempt to develop appropriate measures. However, again as Savickas notes, an initial problem is the diffuseness of career guidance activity, in a range of settings and with a variety of delivery mechanisms.

In the same vein, Herr (2001) calls for "definitions of cost-effectiveness or cost/benefit analyses that have consistency across national career development initiatives and that can frame such results in terms of short-, medium-, and long-term benefits".

Irrespective of the approaches taken, a pre-requisite of meaningful outcome evaluation is the availability of reliable information. As Mayston (2002b) states: "monitoring the extent to which these benefits are achieved, and maximising the value of the careers guidance provided, both depend critically upon the effective deployment of detailed information at national and local level by Learning and Skill Councils and individual guidance providers".

Perhaps one of the most important lessons to be learned from the literature, and one which is alluded to by Herr (2001) is that the three key players in the establishment of criteria for, and the measurement of, outcomes, namely policy makers, practitioners and researchers appear thus far to have engaged in little dialogue with each other, for the purpose of agreeing on common approaches. Without such 'rapprochement', advances in our understanding of the impact of career guidance will continue to be piecemeal and restricted to studies which are of necessity constrained by the narrowness of their focus (eg on specific guidance interventions) or by the limitations of sample sizes and timeframes.

RESEARCH IMPLICATIONS

On the basis of the foregoing discussion, a number of implications and suggestions for the future conduct of research focusing on the outcomes of career guidance delivery can be proposed.

Firstly, as intimated earlier, the need for research which is *longitudinal*, and is therefore capable of identifying longer-term and possibly more deep-seated effects, not merely in terms of individuals' decision-making, assessment of opportunity structures and behaviour (eg take-up of learning/job opportunities), but also attitudinal shifts and perceptions of self, is of great importance. While acknowledging the resource and methodological constraints inherent in undertaking such studies, Watts (1999:14) advocates that "if, ... a few strong studies could be mounted of the relationship between immediate learning outcomes and the longer-term social and economic outcomes, and if positive connections between them could be established, then the learning outcomes could thereafter be regarded not only as of value in their own right but also as proxies for the longer-term outcomes (Killeen, White & Watts, 1992). To date, such studies have not been conducted".

A similar line is taken by Herr (2001), who cites a contribution from Finland: "What is constantly needed in the evaluation of the efficiency of services is long-term follow-up studies by which information might be obtained on the effects of counseling measures".

Allied to this point, assessments and evaluations of specific programmes should seek to take into account *the impact of the programmes on the aspirations motivation and attitudes to learning of the participants*. While these may be deemed the responsibility of qualitative investigative methods, as there would be a need to identify shifts in 'softer' measures, they could easily be accommodated in longitudinal studies which were also collecting quantitative data, in terms of respondents' participation in learning and the labour market.

When designing a research methodology, the complexities of the processes which are being assessed, the presence of a multiplicity of factors which, in addition to the career guidance intervention, may be affecting the outcomes, and the need to measure the impact on aspects such as self-confidence and self-esteem, suggest that extreme caution should be exercised in claiming positive outcomes. Thus, it may be that a fundamental premise of credible studies which seek to explore the benefits, especially the social benefits of career guidance interventions should be the use of *large samples and a range of highly sensitive research instruments* (Killeen, Watts and Kidd, 1998).

At the same time, as Watts (1999:18) argues, developing methodologies and research instruments which enhance our *understanding of the guidance process*, rather than seeking to justify, in outcome terms, the impact of individual interventions or events, may ultimately be more fruitful for assessing whether investment in particular programmes or initiatives is worthwhile.

One area where more research is urgently needed is examining the sources of information, advice and guidance which *impact on the decision-making and behaviour of employees*. Hawthorn et al (2002), in their study of information, advice and guidance for adults in key target groups, contend that "the main and overriding reason for adults to access guidance provision is the belief that it may help them to enhance their job prospects. This refers both to those who are seeking work, and those in employment who are seeking a better job. Within this latter category, employers were found to play a key role in the current provision of IAG". Any research undertaken in this area would need to encompass a whole range of 'hard' and 'soft' outcome measures, and would need to address the outcomes in terms of both the employing organisation and the employee. It should be stated that our lack of knowledge about workplace guidance processes stems partly from the fact that career-related information, advice and guidance is not widely

provided by employers (at least not in a formal sense), and partly because even where this is the case, there seems to be an absence of evaluations.

Among the recommendations made by Hughes et al (2002) are that "there is a need to identify *level of evidence* required to inform public policy debate about appropriate level of guidance investment" (p. 20). This is important for researchers and for the design of research studies which seek to shed light on the issues of outcomes emanating from guidance activity, for without any clear idea of what will be regarded as sufficient evidence of benefits accruing, it is difficult to design and construct studies which fulfil the requirements of policy makers (assuming that it is possible to do so).

Another recommendation is that "short-term evaluation studies should be extended where appropriate, to include client research and to enable a longer-term analyses of key findings and trends". Two points are important here. Firstly, it emphasises the need to allow sufficient time for longer-term effects to be gauged. Secondly, the focus on 'client research' suggests that the views, attitudes, aspirations etc of recipients of guidance are crucial to an understanding of the impact of the guidance process, rather than relying solely on what appears to be the case from 'hard' data, such as take-up, or lack of it, of learning opportunities.

REFERENCES

ACNielsen (1999) *Research into Outcomes from Career Intervention.* Career Services: Rapuara, New Zealand.

Allen J., Hansbro J., Mooney P., (1999) *Pathways to Employment: The Final Evaluation of ESF Objective 3 in Britain (1994-9),* DfEE, London

Allies, S. (1997) Learning for life. *Adults Learning* Vol 8 (3): 66-67.

Andrews, D., Law, B., McGowan, B. and Munro, M. (1998) *Managing Careers Work in Schools.* NICEC Project Report. Cambridge: Careers Research and Advisory Centre.

Audit Commission and Her Majesty's Inspectorate (1993). *Unfinished Business: Full-time Educational Courses for 16-19 Year Olds.* London: HMSO.

Azrin, N.H., Philip, R.A., Thienes-Hontos, P. and Besalel, V.A. (1980). Comparative evaluation of the Job Club program with welfare recipients. *Journal of Vocational Behavior.* 16, 133-145.

Azrin, N.H., Philip, R.A., Thienes-Hontos, P. and Besalel, V.A. (1981). Follow-up on welfare benefits received by Job Club clients. *Journal of Vocational Behavior.* 18, 253-254.

Barham, L., Hughes, D., and Morgan, S., (2000) *New Start - Paving the way for the Learning Gateway. Final evaluation of the personal adviser pilot projects.* London: Department for Education and Employment.

Blundell, R., Dias, M., Meghir, C. and Van Reenen, J. (2000) *Evaluating the New Deal: what has been the effect of the Gateway?* Institute of Fiscal Studies mimeo.

Bosley, S., El-Sawad, A., Hughes, D., Jackson, C. and Watts, A. G. (2001) *Guidance and Individual Learning Accounts.* Report. Derby: Centre for Guidance Studies, University of Derby.

Brooks, R. (1998) *Staying or leaving? A literature review of factors affecting the take-up of post-16 options.* Slough: National Foundation for Educational Research.

Bysshe, S. and Parson, D. (1999) *Evaluation of Learning Direct.* London: DfEE

Campbell, D. P. (1965) *The results of counselling: twenty-five years later*, Philadelphia: Saunders.

Cherry, N. (1974) Do Careers Officers give good advice?, *British Journal and Guidance and Counselling*, Vol 2, pp. 27-40.

Connor, H., and Dewson, S., with Tyers, C., Eccles, J., Regan, J., and Aston, J., (2001) *Social Class and Higher Education: Issues Affecting Decisions on Partcipation by Lower Social Class Groups*: Sheffield. DFEE.

Coopers and Lybrand (1995) *National Evaluation of Skill Choice - Final Report*, Employment Department

Davies, V. and Irving, P. (2000) New Deal for Young People: Intensive Gateway Trailblazers. *Research and Development Report ESR50.* Sheffield: Employment Service.

Eden, D. & Aviram, A. (1993) Self-efficacy training to speed reemployment: helping people to help themselves. Journal of Applied Psychology. Vol 78, pp.352-360.

Evans, J.H. and Burck, H.D. (1992). The effects of career education interventions on academic achievement: a meta-analysis. *Journal of Counselling and Development,* 71, 63-68.

Davies, V. and Irving, P. (2000) New Deal for Young People: Intensive Gateway Trailblazers. *Research and Development Report ESR50.* Sheffield: Employment Service.

Fretz, B.R. (1981) Evaluating the effectiveness of career interventions. *Journal of Counseling Psychology,* 28: 77-90.

Gardiner, K. (1997) *Bridges from benefit to work: a review,* York Publishing Services Ltd: York

Harmon, C., and Walker, I., (2001) The Returns to Education: A review of Evidence, Issues and Deficiencies in the Literature.

Hasluck, C. (2000a) *The New Deal for Young People: two years on.* Research and Development Report ESR41. Sheffield: Employment Service.

Hasluck,C.(2000b) *The New Deal for Lone Parent: A review of evaluation evidence.* Sheffield: Employment Service.

Hawthorn, R., and Watts, A.G., (1992) *Careers Education and the Curriculum in Higher Education.* Cambridge: Hobsons Publishing on behalf of CRAC.

Heckman, J., Ichimura, H. and Todd, P. (1998) Matching As An Econometric Evaluation Estimator, *Review of Economic Studies,* 65, 261-294.

Herr, E.L. (2001) *The Costs/Benefits of Career development Interventions: A Practitioner's Perspective.* Paper presented to Second International Symposium on Career Development and Public Policy, Vancouver, Canada.

Higher Education Funding Council for England (1999). *Widening Participation in Higher Education: Funding Decisions.* Report 99.

Higher Education Quality Council (HEQC), (1994), *Guidance and Counselling in Higher Education.* London : HEQC.

Hirsh W., Jackson C., Kidd J. (2001) *Straight Talking: Effective Career Discussions at Work.* Cambridge: National Institute of Career Education and Counselling.

Hughes, D., Bosley, S., Bowes, L. and Bysshe, S. (2002) *The Economic Benefits of Guidance,* Centre for Guidance Studies Report, University of Derby.

Imbens, G. and Angrist, J. (1994) Identification and estimation of local average treatment effects. *Econometrica,* 62(2) 467-476.

Jackson, C. Watts, A. G., Hughes, D., Bosley, S. and El-Sawad, A. (2001) *Careers service work with adults: a survey.* Occasional Paper, Derby: Centre for Guidance Studies, University of Derby.

James, K. (2001) *Prescriptions for Learning: evaluation report.* Leicester: National Institute for Adult Continuing Education.

Keller, K. Glauber, D, & Snyder, J. (1983) Beliefs-focused and skills-focused employment interventions for women. Journal of Employment Counselling. Vol 20. Pp.163-168.

Killeen, J (1996a) The Learning and Economic Outcomes of Guidance, (1996b) Evaluation in Watts, A, G, Law, B, Killeen, J, Kidd, J. M, and Hawthorn, R (1996) *Rethinking Careers Education and Guidance Theory, Policy and Practice,* London:

Killeen, J., (1996b). *Does guidance work? An evaluation of the intermediate outcomes of Gateways to Learning.* London: Department for Education and Employment.

Killeen, J. and Kidd, J. (1991) Learning outcomes of guidance: a review of recent research, *Employment Department Research Paper 85.*

Killeen, J., Kidd, J.M., Hawthorn, R., Sampson, J. and White, M. (1994) *A Review of Measures of the Learning Outcomes of Guidance.* Cambridge: NICEC.

Killeen, J., Sammons, S. and Watts, A.G. (1999) *The effects of careers education and guidance on attainment and associated behaviour.* Cambridge: NICEC/University of Hertfordshire/ ULIE.

Killeen, J., Sammons, S. and Watts, A.G. (1999) *The effects of careers education and guidance on attainment and associated behaviour.* Cambridge: National Institute for Careers Education and Counselling.

Killeen, J. and White M. (2000) *The Impact of Careers Guidance on Adult Employed People,* DfEE Research Report RR226, Sheffield: Department for Education and Employment.

Killeen, J., White, M. and Watts, A.G. (1992). *The Economic Value of Careers Guidance.* London: Policy Studies Institute.

Lapan, R.T., Gysbers, N.C. and Sun, Y. (1997). The impact of more fully implemented guidance programs on the school experiences of high school students: a statewide evaluation study. *Journal of Counselling and Development,* 75, 292-301.

La Valle, I. and Finch, S. (1999) *Pathways in Adult Learning Survey.* London: DfEE

Martinez, P. (1995) *Factors affecting student retention.* Mendip Report. Coventry: Further Education Development Agency.

Martinez, P. and Munday, F. (1998) *9,000 voices: student persistence and drop-out in further education.* LSDA Report. Coventry: Further Education Development Agency.

Mayston, D. (2002a). *Evaluating the Benefits of Career Guidance,* Centre for Guidance Studies Report, University of Derby.

Mayston, D. (2002b). *Assessing the Benefits of Career Guidance*, Centre for Guidance Studies Occasional Paper, University of Derby.

McGivney, V. (1996) *Staying or leaving the course: retention and non-completion of mature students in further and higher education.* Leicester: National Institute for Adult Continuing Education.

McLeman, P., and Smith, P., The Career Management Initiative at Buckinghamshire Chilterns University College, in Yorke, M., and Stephenson, J., (1998) *Capability and Quality in Higher Education* London:Kogan Page

MORI (2001) *Demand for Information, Advice and Guidance,* The Guidance Council: Winchester

MORI (1996) *Evaluation of ESF Vocational Guidance and Counselling Schemes*, Sheffield: DFEE.

Morris, M., Nelson, J., Rickinson, M., and Stoney, S.M., with Benefield A. (1999) *A literature review of young people's attitudes towards education, employment and training*. London: Department for Education and Employment.

Morris, M. and Schagen, I. with Weston, P. (1996). *The Outcomes of Careers Education and Guidance for Young People: Final Report.* National Foundation for Educational Research (unpublished). Reported by Saunders, L. Stoney, S. and Weston, P. The impact of the work-related curriculum on 14- to 16-year olds. *Journal of Education and Work,* 10(2) 151-167.

Mountain, E. (2001) *What Quality Outcomes for career Development Across All Ages do Policy Makers and Practitioners Jointly Endorse Now? What Might Be/Must Be Added?* Paper presented to Second International Symposium on Career Development and Public Policy, Vancouver, Canada

Myers, R.A. (1986). Research on educational and vocational counseling. In Bergin, A.E. and Garfield, S.L. (Eds.), *Handbook of Psychotherapy and Behavior Change (3rd Edition),* New York: Wiley.

Oliver, L (1979) Outcome measurement in career counseling. *Journal of Counseling Psychology,* 26(3): 217-226.

Oliver, L.W. and Spokane, A.R. (1988) Career intervention outcome: what contributes to client gain? *Journal of Counseling Psychology*, 35(4): 447-462.

Park, A. (1994) *Individual Commitment to Learning: Individuals' Attitudes. Report on the quantitative survey.* Employment Department, Research Series No. 32

Rivis, V., Assuring the Quality of Guidance and Learner Support in Higher Education in Wisker, G., and Brown, S., (1996) *Enabling Student Learning: Systems and Strategies*. London : Kogan Page.

Rosenbaum, P.R. and Rubin, D.B. (1983) The central role of the propensity score in observational studies for causal effects. *Biometrika,* 70, 41-55.

Saunders, L. Stoney, S and Weston P. (1997) The impact of the work-related curriculum on 14 to 16 year olds. *Journal of Education and Work* 10(2) pp 151 et seq.

Savickas, M.L. (2001) *Quality Outcomes for Career Development: The Perspectives of Policy and Practice.* Paper presented to Second International Symposium on Career Development and Public Policy, Vancouver, Canada.

Sillitoe, K. and Meltzer, H. (1985) *The West Indian school-leaver* Vols 1 and 2 London, HMSO.

Sims, D., Nelson, J., Golden, S. and Spielhofer, T. (2001) *Young people's experiences of the Learning Gateway*. Research Report RR277. London: Department for Education and Skills.

Skills Task Force (2000) *Skills for All: Research Report from the National Skills Task Force.* DFEE, Sheffield.

Spokane, A.R. and Oliver, L.W. (1983) The outcomes of vocational intervention, in Walsh, W.B. and Osipow, S. H. (Eds) *Handbook of Vocational Psychology, Volume 2.* Hillsdale, NJ: Lawrence Erlbaum.

Strategies for Widening Participation in Higher Education: A guide to good practice. Higher Education Funding Council for England (2001) Report 01/36 June 2001

SWA Consulting (1999) *Evaluation of early Individual Learning Account development activity.* Research Report 123. London: DfEE.

The National Committee of Inquiry into Higher Education (NCIHE). *Higher Education in a Learning Society*

Tremlett, N., Park, A. and Dundon-Smith, D. (1995) *Individual commitment to learning. Further findings from the individual surveys.* Research Series 54. Social and Community Planning Research. Sheffield: Employment Department.

Tremlett, N., Thomas, A. and Taylor, S. (1995) *Individual commitment to learning: providers' attitudes.* Research Series 47. Sheffield: Employment Department.

Unit for the Development of Adult Continuing Education (1986) *The Challenge of Change*, Leicester: UDACE.

Van Reenen, J., (2001) No more skivvy schemes? Active labour market policies and the British New Deal for the young unemployed in context. WP01/09. London: The Institute for Fiscal Studies.

Verma, G.K. and Darby, D.S. (1987). *Race, Training and Employment.* Lewes: Falmer.

Watts, A.G. (1999) The Economic and Social Benefits of Guidance, *Educational and Vocational Guidance: Bulletin*, 63/1999. International Association for Educational and Vocational Guidance

Watts, A.G. and Herr, E.L. (1976). Career(s) education in Britain and the USA: contrasts and common problems. *British Journal of Guidance and Counselling*, 4(2), 129-142.

Watts. A.G., Law. B., Killeen. J., Kidd. J.M., & Hawthorn.R. (1996) *Rethinking Careers Education & Guidance: theory, policy and practice*. London: Routledge.

Whiston, S.C., Sexton, T.L. and Lasoff, D.L. (1998). Career-Intervention Outcome: A Replication and Extension of Oliver and Spokane. *Journal of Counseling Psychology*, 45(2) 150-165.

White, M. (1992) The potential of guidance: ideas from economics, in Killeen J. et al, *op cit*.

Williamson, E.G. and Bordin, E.S. (1940) Evaluating counselling by means of a control group experiment, *School and Society*, Vol 52, pp. 434-440.

Witherspoon S (1995) *Careers advice and the careers service: the experiences of young people* ED Research Series. Youth Cohort Report 33 Employment Department.

Winterbotham, M., and Adams, L., with Hasluck, C., (2001) *Evaluation of New Deal for Long Term Unemployed People Enhanced National Programme.* Report ESR82. Sheffield: Employment Service.

Yorke, M. Ozga, J. and Sukhnanden, L. (1997) *Undergraduate non-completion in higher education in England.* Higher Education Funding Council for England.

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